

**We claim:**

- 5     1.     Pulverulent solid which consists essentially of at least one metal alkyl compound bound chemically and/or physically to a finely divided, porous, mechanically stable and chemically inert support and which has a proportion by weight of metal alkyl compound of at least 5% by weight, based on the support, and an angle of repose, determined in accordance with ISO 4324, of up to 48°.
- 10     2.     A pulverulent solid as claimed in claim 1, wherein the proportion by weight of the metal alkyl compound is in the range from 10 to 40% by weight.
- 15     3.     A pulverulent solid as claimed in claim 1 or 2, wherein the metal alkyl compounds are selected independently from the group consisting of alkyl compounds of the elements lithium, beryllium, magnesium, calcium, strontium, barium, zinc, boron, aluminum, gallium, indium, thallium, tin and lead.
- 20     4.     A pulverulent solid as claimed in any of claims 1 to 3, wherein the support is an inorganic support, in particular a silicon dioxide, aluminum oxide, or magnesium oxide support or a mixture thereof.
- 25     5.     A process for preparing a pulverulent solid as claimed in any of the preceding claims, which comprises the steps
- 30         - if necessary drying the support to a water content of less than 3% by weight,
- bringing the metal alkyl compound into contact with the support in an inert solvent having a boiling point of less than 30°C,
- 35         - removing the solvent from the pulverulent solid.
6.     A process as claimed in claim 5, wherein the solvent is isopentane.
- 40     7.     A process as claimed in claim 5 or 6, wherein the support is suspended in isopentane and the metal alkyl compound is subsequently added in undiluted form or as a solution in isopentane.

8. A process as claimed in any of claims 5 to 7, wherein the solvent is removed at from 0 to 40°C and pressures up to 10 000 Pa.
9. A process for preparing homopolymers and copolymers of  $\alpha$ -olefins in a gas-phase fluidized-bed reactor, in which the  $\alpha$ -olefin is (co)polymerized in a polymerization zone of the gas-phase fluidized-bed reactor at from 30 to 125°C and pressures of from 1 to 100 bar in the gas phase in a mixed bed of finely divided polymer in the presence of at least one catalyst comprising a transition metal and in the presence of a solid and the resulting (co)polymers are discharged from the reactor, wherein a pulverulent solid as claimed in any of claims 1 to 4 is used.
10. A process as claimed in claim 9, wherein the time-activity behavior of the catalyst used is influenced by means of the solid.
11. A process as claimed in claim 9 or 10, wherein the solid is used to remove oxygen, carbon dioxide, water and/or other interfering compounds during start-up of the gas-phase fluidized-bed reactor.